costs are presented. **RESULTS:** First year costs of non-fatal myocardial infarction varied between 15,592€ in France and 4,089€ in Spain. In subsequent years of treatment, this range was 1226€ (France) to 738€ (Spain). Angina costs were similar across all four countries: 2613€ in France; 3342€ in Germany; 2297€ in Italy; and 2207€ in Spain. Event costs of non-fatal stroke were higher in Germany (19,399€) than in other countries (France 11,754€; Italy 6,583€; Spain 4,638€). Event costs of end-stage renal disease varied depending on the type of dialysis in France (24,608–56,487€), Germany (46,296–68,175€), Italy (43,075–56,717€) and Spain (28,370–32,706€). Lower extremity amputation costs were 31,998€ (France); 22,096€ (Germany); 10,177€ (Italy); and 14,787€ (Spain). **CONCLUSIONS:** Overall, our search showed costs are well documented in France and Germany, but revealed a paucity of data for Spain and Italy. Spanish costs, collected by contacting local experts and from government reports, generally appeared to be lower for treating cardiovascular complications than in other countries. Italian costs reported in the literature were primarily hospitalization costs derived from diagnosis-related groups, and therefore likely to overestimate the cost of specific complications. Additional research is required to document complication costs in Spain and Italy. These data are essential for creating models of diabetes able to accurately simulate the cumulative costs associated with the progression of this disease and its complications.

PDB14

ECONOMIC EVALUATION OF DETEMIR-BASED BASAL/BOLUS THERAPY VERSUS NEUTRAL PROTAMINE HAGEDORN-BASED BASAL/BOLUS THERAPY FOR TYPE-1 DIABETES IN A DUTCH SETTING

Roze S[1], Wittrup-Jensen K[2], Valentine WJ[1], Palmer AJ[1]
[1]CORE—Center for Outcomes Research, Binningen, Basel, Switzerland; [2]Novo Nordisk A/S, Bagsvaerd, Denmark

OBJECTIVES: In a recent randomized, controlled clinical study in patients with type-1 diabetes, use of insulin detemir (IDet) versus neutral protamine Hagedorn (NPH) insulin in a basal (twice daily)/bolus regimen with insulin aspart (IAsp) as bolus, demonstrated that IDet/IAsp was associated with a relative risk reduction of 21% for hypoglycaemic events ($p < 0.05$), a reduction of 1.01 kg in body weight ($p < 0.05$) and decreased systolic blood pressure (SBP) (3 mmHg, $p < 0.05$) versus NPH/IAsp over six months of treatment. No significant difference in HbA1c was noted. The aim of this analysis was to assess the impact of these changes over long-term treatment with IDet/IAsp versus NPH/IAsp. **METHODS:** The CORE Diabetes Model, a peer-reviewed, validated computer simulation model, was used to project these short-term findings to evaluate long-term clinical and cost outcomes. Transition probabilities and risk adjustments were derived from published studies. Baseline cohort characteristics were taken from the clinical trial. Total direct costs (complications + treatment costs) were derived from published sources and projected over patients' lifetimes from a Dutch National Health care perspective. Costs and clinical benefits were discounted at 3.5% per annum. **RESULTS:** Decreased incidence of hypoglycemic events, improved BMI and SBP associated with IDet/IAsp treatment led to fewer diabetes-related complications, increased life expectancy (0.17 years) and improved quality-adjusted life expectancy (0.11 QALYs) compared to NPH/IAsp. Mean total lifetime costs were 626€/patient higher in the IDet/IAsp treatment arm than in the NPH/IAsp group, leading to incremental cost-effectiveness ratios of 3682€ per LYG and 5691€ per QALY gained. **CONCLUSIONS:** Short-term clinical improvements associated with IDet/IAsp were projected to lead to a lower incidence of complications, improved life expectancy and quality-adjusted life expectancy over patient lifetimes. Reductions in the cost of complication partially offset the costs of IDet/IAsp treatment, leading to incremental cost-effectiveness ratios within the range considered to represent excellent value for money.

PDB15

DIABETIC RETINOPATHY MODELING: A COST-EFFECTIVENESS OF VARYING SCREENING INTERVALS IN TYPE-2 DIABETES MELLITUS IN THAILAND

Pornpinatepong S[1], Chaiyakunapruk N[2], Thavorncharoensap M[1]
[1]Mahidol University, Bangkok, Bangkok, Thailand; [2]Naresuan University, Phitsanulok, Phitsanulok, Thailand

OBJECTIVES: To assess the cost-effectiveness of various screening intervals using indirect ophthalmoscopy performed by ophthalmologists for detecting diabetic retinopathy among type-2 diabetic patients from hospital and societal perspectives in Thailand. **METHODS:** A Markov model of diabetes retinopathy was constructed based on Eastman model. A cohort of 10,000 newly diagnosed, type-2 diabetic patients age 40 years was simulated until the age of 75 years or death. Transition probabilities were obtained from literature review, while unit costs and utilization patterns in Thai population were derived from a hospital and expert opinions. Costs of screening and treatment were calculated using a microcosting technique. Incremental cost-effectiveness analyses were performed based on a cohort simulation and presented as incremental Baht per blindness prevented. A series of sensitivity analyses were performed. **RESULTS:** In base-case analysis using a hospital perspective, an incremental cost-effectiveness ratio (ICER) of screening every four-years compared to no screening was 85,976 Baht per blindness prevented. Comparing to the next preceding screening frequency, the ICER of screening frequency every four-years, every three-years, and two-years was 62,806, 70,554, 95,865 Baht per blindness prevented, respectively. When varying the cost of screening and laser treatment, probability of seeking medical treatment among unscreened, probability of being treated with vitrectomy, and annual mortality rate, the results remained similar to the base-case analysis. However, when we performed analysis using a societal perspective, all screening patterns resulted in cost-saving. **CONCLUSIONS:** Our findings indicated that an incremental cost incurred from increasing frequency in all screening intervals was less than 100,000 Baht or US$2,500 per one blindness prevented. Annual diabetic retinopathy screening seems to be a cost-effectiveness intervention, especially from a societal perspective. Our findings can be a very useful information to aid health care policy decision makers during their decision making process.

PDB16

THE ASSOCIATION BETWEEN DIABETES RELATED MEDICAL COSTS AND GLYCEMIC CONTROL: A LONGITUDINAL ANALYSIS

Oglesby A[1], Secnik K[1], Barron JJ[2], Al-Zakwani IS[2], Lage MJ[3]
[1]Eli Lilly and Company, Indianapolis, IN, USA; [2]HealthCore, Wilmington, DE, USA; [3]HealthMetrics Outcomes Research, Groton, CT, USA

OBJECTIVE: To examine how the type-2 diabetes-related direct medical costs are associated with an individual's level of glycemic control. **METHODS:** The analysis was performed on data from a large health plan administrative database. Individuals were defined an index date between October 1, 1999 and April 30, 2001, based upon first diagnosis of diabetes or use of antidiabetic agent and were retrospectively examined in the 12 months pre- and 24–43 months post-index date (N = 10,780). Differ-